

REMARKS

This paper is responsive to the Non-Final Office Action dated April 24, 2003. Claims 1 – 35 were examined. Claims 1 – 35 were rejected. In addition, objections have been raised to claims 26 and 29. Claims 1 and 24 have been amended. Claims 36 – 41 have been added.

Objections to Claims

The Office action objects to claims 26 and 29 under 37 C.F.R. §1.75(c), as being of improper dependent form for failing to further limit the subject matter of precious claims. Applicant respectfully traverses the objection. The subject matter of claims 26 and 29 are further narrow the subject matter of their parent claims. Although claim 24 refers to an information resource (in the positive recital of a proxy therefore), claim 24 does not require the information resource itself. Claim 26 adds the requirement of an information resource in the security system of claim 24. Similarly, claim 27 refers to the security barrier, but the information security system of claim 27 does not include a security barrier. Claim 29 adds a security barrier to the information security system of claim 27.

Rejections under 35 U.S.C. §103(a)

The Office Action rejects claims 1, 2, 6, 10, 13, 15, 16, and 24 – 29 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent 5,835,726, granted to Shwed, et al. (the Shwed reference) in view of U.S. Patent No. 5,602,918, granted to Chen, et al. (the Chen reference). The Office Action also rejects claims 4, 5, 7 – 9, 14, and 17 – 23 under 35 U.S.C. §103(a) as being unpatentable over the Shwed reference in view of the Chen reference, and further in view of U.S. Patent No. 5,870,549, granted to Bobo II (the Bobo reference). The Office Action also rejects claims 30, 31 – 33, and 35 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent 5,710,889, granted to Clark, et al. (the Clark reference) in view of the Chen reference. Applicant respectfully traverses all of these rejections.

The Office Action rejects independent claims 1, 24, and 27 based on an improper interpretation of the Shwed reference modified to include a firewall as disclosed in the Chen reference. Since the relied upon disclosure of Shwed is that of a packet filtering firewall, there is

no suggestion or motivation to combine or modify the Shwed reference with the Chen reference to add a firewall. The Office Action uses the same mistaken understanding of the Shwed reference modified to include data translation as disclosed in the Bobo reference to reject independent claims 17 and 22. The Shwed reference does not teach or suggest Applicant's claims. Moreover, the addition of the Chen reference or the Bobo reference still does not teach or suggest Applicant's claims. Nonetheless, in an effort to more clearly recite two qualitatively different features, namely (i) validating of message encoded in accordance with a structured language, and (ii) transmission of a message so validated across a security barrier, Applicant has amended certain of the claims.

#### The Shwed reference

The Shwed reference discloses 1) packet filtering, and 2) key exchange between a source and destination. Neither the Shwed packet filtering disclosure nor the Shwed key exchange between a source and destination disclosure teach or suggest requirements of Applicant's claims. More specifically, the Shwed reference does not teach or suggest "validating a request message **encoded in a structure request language** against a predefined request message specification therefor...validating a response message **encoded in a structured response language** against a predefined response message specification therefor, the response message corresponding to the validated request" as found in claim 1, "validates a request message **encoded in a structured request language** against a predefined request message specification therefor" as found in claim 24, or "preparing a request message corresponding to the access request in a structured language corresponding to a predefined request message specification...validating the request message against the predefined request message specification" as found in claim 27.

The Shwed reference discloses packet filtering to control packet flow for securing private networks from outside attack (Abstract), and **does not ensure compliance with a predefined message specification and does not contemplate a structured language**. The Shwed reference never discusses validating messages against a message specification. The Office Action erroneously interprets a packet filter to be equivalent to a message specification. Validating messages against a message specification is a fundamentally different function than

packet filtering. Packet filtering rules (i.e., a set of permits and denies for particular Internet Protocol addresses) **do not correspond to a structured language.**

The Shwed reference also discloses request and response messages when describing a key exchange between a source and destination. The Shwed reference discloses a key exchange between two firewalls (Figures 16, 17, and 20) and between a firewall and a personal computer (Figures 21 – 23). These exchanges disclosed in the Shwed reference are not similar to the above quoted claim language.

#### The Shwed reference and the Chen reference

As already discussed, the Shwed reference does not teach or suggest Applicant's claims. The Office Action states that the Shwed reference does not disclose a security barrier, and thus employs the Chen reference to add a firewall. However, the Shwed reference discloses a firewall. Therefore, there is no suggestion or motivation to combine or modify the Shwed reference with the Chen reference, at least because the Shwed reference already discusses firewalls. Hence, the addition of the Chen reference does not add anything to the Shwed reference. The Shwed reference in view of the Chen reference does not disclose or suggest Applicant's claims, especially the above quoted claim language.

Neither the Shwed reference nor the Chen reference standing alone or in combination teach or suggest Applicant's claimed invention. For at least the reasons stated above, Applicant respectfully submits that Applicant's independent claims 1, 24, and 27 are patentable over the Shwed reference in view of the Chen reference and that Applicant's claims are allowable.

#### The Shwed reference, the Chen reference, and the Bobo reference

The Office Action attempts to modify the Shwed reference with both the Chen reference and the Bobo reference to support a rejection of Applicant's independent claims 17 and 22. For the reasons discussed above, the Shwed reference, standing alone or modified in view of the Chen reference, does not teach or suggest **“a request message specification corresponding to a structured request language...validating the formatted access request in accordance with the request message specification...forwarding the validated access request across the security barrier”** as found in claim 17 or **“the data broker validates a request message against a**

**predefined request message specification that corresponds to a structured language** and forwards only validated request messages across the security barrier” as found in claim 24. As stated above, packet filtering and message validation are not the same. In addition, a packet filter does not correspond to a structured language.

In addition, the Office Action does not address “**predefining a request message specification corresponding to a structured request language**” as found in claim 17. There is no indication that this element is found in any of the references discussed in the Office Action, and Applicant respectfully submits that these references do not disclose or suggest the quoted claim language from claim 17.

The Bobo reference discloses a message storage and deliver system that translates voice messages and facsimiles into hypertext markup language files (Abstract). The Bobo reference does not teach or suggest “formatting an access request in accordance with the structured request language” as found in claim 17 or “formatting a response to an access request targeting the information resource, the formatted response being in accordance with the structured response language” as found in claim 22. The Office Action assumes that translating voice messages and facsimiles into a markup language format is formatting a response or request in accordance with a structured request or response language. The Bobo reference discloses receiving requests for files or messages, but never describes or suggests formatting the requests in accordance with a structured request language. Even if translating and formatting were equivalent, which they are not, the Bobo reference never discloses translating requests. Attempting to equate translating and formatting as done by the Office Action suggests that the Bobo reference could translate its requests as it translates voice messages and facsimile data, but such a translation of requests would cause an unintended result.

Neither the Shwed reference, the Chen reference, nor the Bobo reference, standing alone or in combination, teach or suggest Applicant’s claimed invention. For at least the reasons stated above, Applicant respectfully submits that Applicant’s independent claims 17 and 22 are patentable over the Shwed reference in view of the Chen reference and the Bobo reference, and that Applicant’s claims are allowable.

The Clark reference and the Chen reference

The Clark reference discloses “an interface device for electronically integrating a plurality of financial services provided at different geographical locations...and delivering such services directly to a customer facility at any time requested by the customer” (Abstract). The Clark reference discloses the interface device processing transaction instruction messages (TI) from customers. “The header and main body portions of the messages are in a structured format, either adhering to industry standards (e.g., message formatting standards managed by the Society for Worldwide Interbank Financial Telecommunications (“S.W.I.F.T.”)), or meeting administrative requirements of the delivery system” (col. 7, line 63 – col. 8, line 2). The global interface device of the Clark reference “receives the message...and then validates the construction of the message....” (col. 10, lines 19 – 24).

However, the Clark reference does not teach or suggest “parser code including instructions executable as a first instance thereof to validate the received access requests against the predefined request message specification” as found in claim 30. The TI messages disclosed in the Clark reference are specifically described as containing “a series of defined data elements that identify the customer, user, location, branch, account, message type, date, time, and so forth” (col. 7, lines 56 – 58). An access request is not a TI message, although an access request can contain a TI message. Even if a TI message is similar to an access request, which it is not, the functionality performed by the global interface device as disclosed in the Clark reference is not similar to the functionality claimed by Applicant. When the global interface device performs the construction validation as disclosed in the Clark reference, it is ensuring that the message includes the particular data elements. A global interface device that ensures inclusion of particular data elements in a message is not similar to parser code that validates access requests against a predefined request message specification.

In addition to not teaching or suggesting Applicant’s above quoted claim limitation, the Office Action admits that the Clark reference does not teach or suggest “data broker code including instructions executable as a first instance thereof to... forward validated ones of the access requests across the security barrier toward the information resource” as found in claim 30. So, the Office Action relies on the Chen reference.

The Office Action attempts to achieve Applicant's claimed invention by modifying the Clark reference in view of the Chen reference in a conclusive fashion. There is no suggestion or motivation to modify the Clark reference with the Chen reference. The Chen reference does not teach or suggest the above quoted claim limitation.

Neither the Clark reference nor the Chen reference, standing alone or in combination, teach or suggest Applicant's claimed invention. For at least the reasons stated above, Applicant respectfully submits that Applicant's independent claim 30 is patentable over the Clark reference in view of the Chen reference, and that Applicant's claims are allowable.

#### Dependent Claims

The Office Action rejects dependent claim 3 under 35 U.S.C. §103(a) as being unpatentable over the Shwed reference in view of the Chen reference and further in view of "Applied Cryptography" (the Schneier reference). The Office Action also rejects dependent claims 11 and 12 under 35 U.S.C. §103(a) as being unpatentable over the Shwed reference in view of the Chen reference and further in view of U.S. Patent No. 5,835,726, granted to Ottensooser (the Ottensooser reference). The Office Action also rejects dependent claim 34 under 35 U.S.C. §103(a) as being unpatentable over the Shwed reference in view of the Chen reference and further in view of the Bobo reference.

As previously discussed, the Shwed reference modified with the Chen reference does not teach or suggest any of Applicant's independent claims.

#### Claim 3

The rejection to claim 3 is unclear because the heading for the rejection refers to the Schneier reference, but the explanation of the rejection refers to U.S. Patent No. 5,805,803, granted to Birrell et al. (the Birrell reference). Applicant respectfully submits that neither the Schneier reference nor the Birrell reference on their own or with the Shwed reference teaches or suggests claim 3.

Claims 11 and 12

The Office Action cites to sections of the Ottensooser reference that disclose a script definition language (SDL) parser and a Plan parser (col. 7, lines 53 – 63). The Ottensooser reference discloses the SDL parser loading System Static Tables and checking a script definition file before loading Script Definition Tables to be used by the Plan parser (col. 7, lines 54 – 55). The Plan parser of the Ottensooser reference uses the Script Definition Tables and the System Static Tables to validate a plan (col. 7, lines 59 – 61). The Ottensooser reference does not teach or suggest “parsing the request message using Data Type Definitions (DTDs) encoding a hierarchy of valid tag-value pairs in accordance with syntax of a valid request message; and if the request message is not successfully parsed, forwarding a response message without transmission of the request message across the security barrier” as found in claim 11 or “parsing the response message using Data Type Definitions (DTDs) encoding a hierarchy of tag-value pairs in accordance with syntax of a valid response message” as found in claim 12.

Claim 34

The Shwed reference modified in view of the Chen reference and the Bobo reference does not teach or suggest claim 34 for at least the reasons discussed above with respect to claims 17 and 22.

All of the dependent claims 2 – 16, 18 – 19, 23, 25 – 26, 28 – 29, and 31 - 41 are dependent on corresponding ones of the above allowable independent claims. Applicant respectfully submits that all of the dependent claims are allowable for at least the reasons discussed above.

Conclusion

In summary, claims 1 - 41 are in the case. All claims are believed to be allowable over the art of record, and a Notice of Allowance to that effect is respectfully solicited. Nonetheless, if any issues remain that could be more efficiently handled by telephone, the Examiner is requested to call the undersigned at the number listed below.

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Respectfully submitted,



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